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PETER MIESZKOWSKI AND THE GENERAL EQUILIBRIUM REVOLUTION IN PUBLIC FINANCE

James R. Hines Jr., University of Michigan and NBER

INTRODUCTION

THE IMPORTANCE OF UNDERSTANDING THE implications of general equilibrium is by now abundantly clear to researchers analyzing public finance issues. What is perhaps less apparent is that this was not always so. The study of public finance was radically transformed during the 15 years between 1959 and 1974 by the pioneering efforts of a small number of leading scholars, notably including Peter Mieszkowski. Thanks to their efforts, the analysis of applied problems in public finance moved from partial equilibrium to general equilibrium, providing the methods and insights that characterize modern public economics.

The transformation began with the publication of Richard Musgrave's *The Theory of Public Finance* (1959), a book that isolated and analyzed the allocation, distribution, and stabilization functions of government in general equilibrium settings. The subsequent analysis of deadweight loss, tax incidence, optimal taxation, efficient provision of public goods, fiscal federalism, tax competition, behavioral responses to taxation, and a host of other public finance issues grew from the general equilibrium framework that Musgrave pioneered and that were applied and developed by those working on these issues in the 1960s and 1970s.

GENERAL EQUILIBRIUM REASONING IN PUBLIC FINANCE

As was evident from this and other research, general equilibrium reasoning completely changes thinking about tax incidence, the effects of taxation on taxpayer behavior, the efficiency consequences of taxation, optimal tax design, and the constraints that governments face in setting tax policies. The general equilibrium framework is so compelling that it makes you wonder why researchers ever use partial equilibrium tax analysis, though the answer is simple: general equilibrium tax analysis is very challenging. The lesson of general equilibrium is not only that everything affects everything else – but that everything affects everything else in two ways: through supply and through demand. So

thinking one's way through this thicket is unlikely to be easy, particularly since human brains are wired for partial equilibrium.

Simple tax analysis is not necessarily bad, but partial equilibrium frameworks are capable of offering answers that are, well, wrong. That is why it is critically important to have tax analysis that sensibly works through what general equilibrium has to say, and that maps general equilibrium insights into practical implications in a way that normal human beings can understand. This begs the question of whether normal human beings can do general equilibrium tax analysis; the answer is that we can now, but only because some abnormally intelligent and sophisticated predecessors, notably including Peter Mieszkowski, showed us how.

It is instructive to consider the implications of general equilibrium for simple tax incidence problems. In partial equilibrium, the incidence of a tax is determined by supply and demand in the market for the taxed activity. If supply is inelastic or demand perfectly elastic, then the burden of a tax is borne by suppliers; conversely, if demand is inelastic or supply perfectly elastic, then the burden of a tax is borne by buyers. In general equilibrium, the partial equilibrium insights are still present, but one also traces the impact of a tax through all of the other markets that it may affect, which can entirely change the answer. For example, in the case of the Edgeworth/Hotelling taxation paradox, the imposition of an excise tax can reduce the after-tax price of a commodity through its effects on other markets, even though all markets are perfectly competitive (Edgeworth, 1897a, 1897b, 1897c; Hotelling, 1932; Vickrey, 1960).

In the Harberger (1962) corporate income tax model, a higher corporate income tax can increase the returns to owners of corporations by depressing the demand for labor, if the corporate sector is labor-intensive. The corporate income tax has two, potentially offsetting, effects on capital demand, one a partial equilibrium effect, the other a general equilibrium effect. The partial equilibrium effect is to encourage corporations to substitute labor for capital inputs, thereby reducing capital demand; this

was commonly understood to be the entirety of the effect of corporate taxes prior to the appearance of Harberger's article. The general equilibrium effect stems from the induced reallocation of production in the economy. If the noncorporate sector of the economy uses capital more intensively than does the corporate sector (which is quite possible, since the noncorporate sector includes capital-intensive industries such as agriculture and real estate), then the reallocation of production increases the demand for capital. The net effect of the corporate tax on capital demand, and therefore on returns to owners of capital, thus depends on the combined effect of substitution and reallocation, which is an empirical question, and the subject of Krzyzaniak and Musgrave (1963), Cragg, Harberger, and Mieszkowski (1967), and a host of subsequent studies. While empirical studies have yet to reach a consensus on the incidence of the corporate income tax, there does appear to be a consensus that the tax must be analyzed in the general equilibrium landscape pioneered by Musgrave, Harberger, Mieszkowski, and their colleagues. Indeed, since then public finance economists have never been quite satisfied with analyzing the incidence of any tax in partial equilibrium, unless such analysis is supplemented by general equilibrium considerations.

PETER MIESZKOWSKI ON GENERAL EQUILIBRIUM TAX INCIDENCE

Peter Mieszkowski published masterful papers in the *Journal of Political Economy* in 1967 and the *Journal of Economic Literature* in 1969 in which he clearly elucidated and extended the general equilibrium theory of tax incidence. As Atkinson and Stiglitz (1980, p. 173) note, it was Mieszkowski who in this 1967 *Journal of Political Economy* paper identified what are now understood to be the two main effects of corporate taxation in the Harberger model: the factor substitution effect and the output effect. In a very forward-looking summary, Mieszkowski (1967, p. 260) writes:

More generally, controversies, such as whether taxes are shifted forward onto the consumer or shifted back onto factor earnings, are seen to be sterile when viewed in general equilibrium terms. For example, a commodity tax on a particular commodity is shifted forward only in the sense that the price of this commodity will rise relative to other

commodities, and this factor is of no interest if all groups spend the same proportions of their incomes on the same commodities. Furthermore, it is only meaningful to talk of a partial factor tax's being shifted to consumers to the extent that relative commodity prices change and under the condition that it is possible to ignore the factor-substitution effect and the factor-intensity effects of this tax. The point is, of course, that there are two sides to incidence, the use of income and the source of income, and there is no a priori reason why one side should be given preference over the other.

Getting the theory right was just one piece of what Peter Mieszkowski was up to, particularly since conflicting forces made ultimate incidence an empirical question. A separate paper of his with John Cragg and Arnold Harberger (1967) in the *Journal of Political Economy* carefully reexamined the empirical analysis of the corporate income tax by Krzyzaniak and Musgrave (1963), offering fresh insights and raising doubts about the type of time series empirical analysis that was then very common.

THE "NEW VIEW" OF THE PROPERTY TAX

There was a great deal of confusion over competing views of the impact of the property tax prior to the publication of Peter Mieszkowski's seminal paper presenting the "new view" of the property tax in the *Journal of Public Economics* in 1972. The Mieszkowski paper shows how to reconcile these views, and offers the nicely derived interpretation that under certain conditions the burden of even a local property tax falls ultimately on national capital (as well as having some local effects).

In the Mieszkowski framework, a local property tax discourages local property investment, thereby indirectly increasing capital investment elsewhere. This depresses the pretax return to capital elsewhere, ultimately burdening all capital owners. There nevertheless remain important local effects, and local incidence, of the property tax, but you miss something terribly important by ignoring the effect of the tax on capital everywhere. This interpretation was subsequently christened by others as the "new view" of the property tax; it is very important, and it still feels new.

The Mieszkowski paper on the "new view" appeared in the inaugural issue of the *Journal*

of *Public Economics* (April 1972). That issue featured a superstar lineup of contributors: Leif Johanson; James Buchanan and Charles Goetz; Martin Feldstein; Peter Mieszkowski; Anthony Atkinson and Joseph Stiglitz; Mervyn King; and Agnar Sandmo. One indication of the importance of the Mieszkowski paper on the “new view” is that, on the front cover of the paper copy of this issue of the *Journal of Public Economics* from the UC-Berkeley economics department library, someone circled the title of the Mieszkowski paper and wrote in the margin, “this is the good one.”

OTHER CONTRIBUTIONS

Peter Mieszkowski has done extremely influential work on interjurisdictional competition in a variety of contexts, including his 1986 *Journal of Urban Economics* paper with George Zodrow that analyzes a setting in which jurisdictions compete to attract mobile capital. In this model, tax competition leads to low tax rates, thereby producing inefficiently small public sectors – inefficient in the sense that coordinated policies among jurisdictions would produce a Pareto improvement. How much of this actually happens in our world? I’m not sure, and no one else is either – but what I do know for sure is that the standard framework for analyzing these questions dates to the publication of this article.

Populations are also mobile, and Peter Mieszkowski’s extremely important 1974 *Journal of Public Economics* paper with Frank Flatters and Vernon Henderson considered a setting in which individuals are mobile and there are imperfectly corrected congestion externalities, finding that the migration process significantly affects the efficiency of local public good provision. Intergovernmental grants have the potential to affect these outcomes, and this article and follow-up work by Peter Mieszkowski and George Zodrow (in the *Journal of Economic Literature*, 1989) and Peter Mieszkowski and Richard Musgrave (in the *National Tax Journal*, 1999) evaluated these and other issues.

A “NEW VIEW” OF PETER MIESZKOWSKI

The decades of the 1960s and 1970s are remembered for many things; one of the things for which they surely should be remembered is the transformation that took place in the way that public economics was understood and practiced.

The essence of Peter Mieszkowski’s “new view” of the property tax is that the tax policies of one jurisdiction, however small, can have significant price effects elsewhere.

Can the same be true of individuals? Can it be that the activities of a lone scholar, thinking deeply and publishing his insights, can affect the world of scholars in such a significant way? Of course it can.

We have Peter Mieszkowski and a very small number of others to thank for utterly transforming the way that the rest of us think about taxation – and not in some arid, abstract manner, but in a very real and practical way, connected to theory, connected to data, and connected to the tax policies that concern the world every day.

Cast in “new view” terms, Peter Mieszkowski’s work lowered the cost of insight for the rest of us.

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